

REMARKS

This is in response to the non-final Official Action currently outstanding with regard to the present application.

Claims 19 - 29 were pending in this application at the time of the issuance of the currently outstanding Official Action. By the foregoing Amendment, Claims 19 - 29 have been amended for clarity of expression. No claims have been added, cancelled or withdrawn. Accordingly, upon the entry of the foregoing Amendment, Claims 19 - 29 as hereinabove amended, will constitute the claims under active prosecution in this application.

The claims of this application are reproduced above including appropriate status identifiers and showing the Amendments made as required by the Rules.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC §119 (a)-(d) or (f), and confirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;
2. Indicated the drawings filed as part of this application on 28 January 2002 have been accepted, but also objected to the drawings under 37 CFR 1.83(a) on the grounds that the drawings must show every feature of the invention specified in the claims and that the features "element data prepared in units of reproduction is displayed" (see lines 1-2 of Claim 19) and "the data for high speed reproduction is displayed" (see lines 4-5 of Claim 19) are not so displayed and required Applicants to provide amended drawing showing those elements or to cancel those features from the claims;

3. Indicated that Applicants Information Disclosure Statements as filed on 18 July 2000 (and with the above identified application), January 21, 2004, April 20, 2004 and June 28, 2004 have been received and considered by providing the Applicants with copies of the Forms PTO-1449 that accompanied those Information Disclosure Statements duly signed, initialed and dated by the Examiner (Applicant has review these documents and agrees that the items crossed out on those forms are duplicative of citations appearing elsewhere therein – the Examiner’s close review of this art and Applicants’ related submission is appreciated).
4. Rejected Claims 19-29 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention.
5. Rejected Claims 19-29 under 35 USC 112, first paragraph, for failure to comply with the enablement requirement, i.e., the claims are alleged by the Examiner to contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
6. Rejected Claims 19, 20, 24 and 27-29 under 35 USC 102(b) as being anticipated by Komatsu (JP 02-023469 – cited by Applicants).
7. Rejected Claim 21 under 35 USC 103(a) as being unpatentable over the Komatsu reference as applied to Claim 19.
8. Rejected Claims 22, 23 and 26 under 35 USC 103(a) as being unpatentable over the Komatsu reference as applied to Claim 19, further in view of Yokono (JP 01-108678 – cited by Applicants)

Further comment regarding items 1-3 above is not deemed to be required in these Remarks.

With regard to item 4 above, Applicants acknowledge that the Examiner has indicated that the feature “element data prepared in units of reproduction data is displayed” and the feature “the data for high speed reproduction is displayed” of Claim 19 are not adequately shown in the drawings or disclosed in the specification of this application. Applicants respectfully disagree for the following reasons and therefore respectfully traverse the Examiner’s currently outstanding objections to the drawing of this application as they presently stand. In other words, Applicants respectfully submit that the drawings of this application adequately depict all of the elements claimed and that the Examiner’s objection to the drawings should be withdrawn.

In support of this position, Applicants respectfully call attention to the following facts. A display is shown clearly in the drawings of the above-identified application at reference numerals 5 and 105 (see Figs. 12-15 and 17). Further, it is clearly described in the specification that the features of claim 19 that the Examiner has questioned are those that are to be shown on the displays 5 and 105 (see particularly Figs. 11, 12 and 17) because the claimed “units” clearly are pages as indicated at least at page 8, lines 16-20 specifically, and also throughout the specification which discusses the display of a book by page units generally.

Accordingly, while it may be true that the specific wording of Claim 19 is not be illustrated exactly *in a single figure of the drawings* of this application, it nevertheless also is true that when the content of the drawings is taken together all of the limitations of Claim 19 are clearly present therein.

In further support of this position, Applicants respectfully submit that it is so clear as not to be questionable in any way that Figs. 12 and 14 unambiguously and specifically illustrate display devices for displaying element data. Also, while not specifically described with respect to Fig. 12, Applicants respectfully submit that the specification is clear in its indication that the screen of the device depicted in Fig. 14 is to display data in the page format generally shown in Figs. 15 and representatively indicated in Fig. 17 (Note, at Page 34, lines 2-4, it is stated that: “As shown in Fig. 17, each page is composed of element data. (herein referred to as objects) such as character data, image data, audio data and video data.” i.e., element data prepared in page units.”

Also, Fig. 17 is described at page 11, lines 13-14 as "...a mimic illustration of each page composed of plural objects arranged therein.") This is the basic gist of the teachings contained at Page 31, line 20 to Page 34, line 16 of the present specification. In addition, at page 8, lines 16-20, and elsewhere in the present specification, it is indicated that a "unit of reproduction" in the present specification is taken as being represented by a "page".

Applicants also respectfully submit that a similar discussion applies to the depictions in Figs. 11 and 12 of the above-identified application. Specifically, with respect to Fig. 11 it is stated at page 20, lines 8-11 that: "In Fig. 11 it is assumed that A is a display preparation image memory for image data of a page being displayed and B is a display preparation image memory for image data of a page to be displayed next." Thereafter, starting at page 22, line 8, the present specification unambiguously indicates that portion TO of Fig. 11 shown on the display screen 5 in Fig. 12 is illustrative of a particular way in which the page turning theretofore discussed with regard to Figure 11 might be accomplished in a specific example. Applicants respectfully submit that it is clear therefore that Fig. 12 shows the image data of A of Fig. 11 on the display screen 5.

Furthermore, Applicants respectfully submit that, contrary to the Examiner's assertion, the drawings of the above-identified application as they presently stand when taken together clearly show "element data prepared in units of reproduction is displayed", i.e., pages of data in the format of Fig. 15 representatively shown in Fig. 17 as being indicative of at least the initial display to be present on the screen of the device shown in Fig. 14. Furthermore, Applicants respectfully submit that the display preparation image memory for image data of a page A depicted in Fig. 11 is clearly shown on the screen 5 of Fig. 12 of the present specification.

Finally, Applicants are not aware of any Rule or requirement that indicates that all of the elements claimed must be depicted in the same respective figure of the drawings such that the basic display device with its screen blank of the present invention cannot be shown properly in one figure while a representative display to be depicted thereon is shown in another figure. In addition, even if there were such a Rule, Applicants respectfully submit that Fig. 12 clearly and definitely shows a page of data as discussed with regard to Fig. 11 displayed on the screen 5 therein shown in the context of an explanation of the turning of pages.

In view of the foregoing comments and since the nature of the display is illustrated in certain of the drawings while a device that includes a screen upon which that display content is actually to be displayed is unequivocally shown in certain other of the present drawings of this application, Applicants respectfully submit that the Examiner's indication that the drawings fail to show "element data prepared in units of reproduction" by the display device cannot be supported on the present record and should be withdrawn in response to this communication. A decision so holding is respectfully requested.

In addition, Applicants respectfully submit that similar logic applies to the Examiner's assertion that the drawings do not show "the data for high-speed reproduction is displayed". In this case, Applicants agree that neither Fig. 11 or 12 nor Fig. 14 or 17 depicts the data for high-speed reproduction displayed on the screen of the display devices shown. However, Applicants respectfully submit that it is clearly indicated at page 42, line 5 *et seq.*, that the thinned image (defined in the specification as one form of high-speed data) depicted on the right-hand side of Fig. 26 is read and displayed during page turning. Thus, as was the case above, Applicants respectfully submit that the display device is shown in one figure of the drawing while the alternative potential display content is shown in others of the drawings with the specification providing a clear linking explanation to anyone of ordinary skill in the art indicating that the depictions in certain of the Figures are representative of the content that would be displayed on the screen of the display device at various times during the operation thereof. Applicants therefore respectfully submit that the Examiner's position on the latter point should be withdrawn in response to this communication as well. A decision so holding also is respectfully solicited in response to this communication.

As summarized in items 5 and 6 above, the Examiner also has rejected claims 19-29 under 35 USC §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In addition, the Examiner has rejected Claims 19-29 under 35 USC §112, first paragraph, because the specification allegedly fails to contain the required written description of the invention in such a manner that a person of ordinary skill in the art could understand the invention and the fact that the Applicants had that invention in their possession at the time that the present application (i.e., the parent application) was filed. In particular, with respect to Claim 19, the Examiner states a concern that the device claims do not specify the apparatus elements involved in the processing and display of the data.

According to the Examiner, this renders it unclear whether an apparatus or a method is being claimed. Thus, the Examiner at page 5 of the currently outstanding Official Action suggests that the present application does not fairly and clearly describe and/or claim the elements of the display device that (i) prepares the element data in units of reproduction, (ii) divides the units of reproduction into data for high-speed reproduction and remaining data, (iii) stores the data for high speed reproduction and remaining data, (iv) reproduces the data for high speed reproduction, and/or (v) the source of the command for starting high-speed data reproduction.

In response to the Examiner's concerns in the latter regard, Applicants respectfully submit that the specification of the present application is abundantly clear that the data is input and stored. In particular, during the course of the input and storage prior to output the input data is placed into a desired format (here a "page") that is representative of a unit of reproduction. Applicants respectfully submit that there simply is no need to distinguish between the input and the means by which the data is manipulated into the format desired in the course of being transferred between memories. The simple fact is that the data is input and that during that input or the input from one storage to another the data is formatted and each piece of data is designated either as high-speed data or remainder data. Finally, it is clear that the input from the user is the command that starts data reproduction and determines whether the high-speed data will be utilized alone or together with the remainder data. Hence, Applicants respectfully submit that the Examiner has elevated form over substance in the course of his rejection under 35 USC 112, first paragraph.

Despite the foregoing and even though the present specification clearly indicates that **a CPU controls the entire device and its operation**, Applicants recognize that the Examiner has raised some potentially valid issues regarding the clarity of the present claim phraseology at page 4 of the currently outstanding Official Action.

Accordingly, while not believed to be technically necessary, Applicants nevertheless hereinabove have revised the present claim phraseology in a manner that is deemed to address the Examiner's concerns (i.e., what is a "part of bits" in Claim 22; what is a "significant bit image" in Claims 23 and 26; what is meant by "at least one" in Claims 25 and 28; and what is meant by "it" in Claim 27). Applicants believe that the foregoing revisions of the currently pending claims are fully supported by the present specification (see in particular with respect to Amended Claim 25 present specification at page 42, line 17 to page 43, line 17, and Page 47, lines 11-16). With respect to Amended Claim 27, see in particular present specification at page 51, lines 2-8.) Applicants also respectfully submit that sufficient support for each of the other amendments appears in the following discussion regarding the clarified present claims in a manner that overcomes the portions of the Examiner's outstanding rejections/objections mentioned immediately above.

Turning now to the Examiner's substantive rejections under 35 USC 102(b) and 35 USC 103(a) as summarized in items 6-8 above, the Examiner has rejected claims 19-20, 24-25 and 27-29 under 35 USC §102(b) as being anticipated by Komatsu (JP 02-023469, cited in Applicants' Information Disclosure Statement filed on 17 July 2002). In addition, the Examiner has rejected claim 21 under 35 U.S.C. §103(a) as being unpatentable over Komatsu as applied to claim 19. Further, the Examiner has Rejected Claims 22, 23 and 26 under 35 USC 103(a) as being unpatentable over the Komatsu reference as applied to Claim 19, further in view of Yokono (JP 01-108678 – cited by Applicants).

Applicants respectfully submit that the Examiner's positions with regard to the Komatsu reference are inconsistent with one another and demonstrate in inappropriate nature of the Examiner's proposed combination of the Komatsu and Yokono references. Thus, at item 11 with regard to Claim 19, the Examiner suggests that in Komatsu the element data is page information and further that the units of reproduction are the different types of information (i.e., text, graphics etc.). In item 11 with regard to Claim 24, on the other hand, the Examiner suggests that thinning of the image data is to be accomplished by omitting graphic and picture data and processing only text.

Hence, Applicants respectfully submit that reading the Examiner's stated position with regard to Claim 24 consistently with the Examiner's interpretation of Claim 19 would result in the removal of one or more "units of reproduction" from the "element data" prior to reproduction. Applicants respectfully submit that such is not the correct way to analyze the present issues.

In addition, Applicants respectfully also submit that the Komatsu reference is correctly read as separating the various types of "element data" within defined "units of reproduction" and therefore teaches away from the application of the Yokono concept to the Komatsu reference as it relates to the distinguishing significant and non-significant bits of an entire page of data including various types of data (i.e., units of reproduction" as in the present invention). In other words, as elsewhere indicated, Komatsu reads and displays only one type of element data at a time, not a thinned version of all of the data that makes up a "unit of reproduction". Thus, an attempt to combine Komatsu with Yokono might thin each type of element data via significant and non-significant bits, but does so in the context of the display of only one type of element data at a time. Applicants respectfully submit that such a teaching is contrary to that of the present invention as will appear further below.

Thus, Applicants respectfully submit in the Komatsu reference, all information types are stored together with one another in a data storage along with a management table that keeps track of the location of each information piece. Then, on reproduction, the management table is read, the different types of information (data) making up the page are recognized, and the system prioritizes the retrieval and reproduction of the data according to the speed with which each data type can be reproduced (regardless of whether or not it has been thinned according to significant bits and non-significant bits as in Yokono or otherwise). Accordingly, it is Applicants' understanding of the Komatsu reference that the type of data that can be reproduced the fastest is reproduced first so that a user can determine as quickly as possible whether or not the reproduction should be allowed to continue.

The foregoing is respectfully submitted by Applicants to be conceptually different from the present invention.

Specifically, in the present invention, the image data elements are stored in groups as represented by the various formats discussed in the specification so as to divide the data elements to be readable in a manner necessary for their gradual transition one to the next. Also, in the present invention, the entire reproduction unit is “thinned” so as to facilitate “paging through” reproduction units that are not of interest. In this regard, the “thinning” operation selects only portions of each of the multi-bit points or pixels that together represent the entire reproduction unit (not the various types of “element data” separately).

Thus, in the present invention, the thinned portions and the remainder portions are stored together and the user can select either to view both together (i.e., as a “reproduction unit”) or he may select specified thinned element portions of each of the data points alone so as to speed up the data that has to be handled in paging through a selected number of reproduction units in the sequence thereof quickly. **In other words, in the present invention by utilizing the thinned data, the user can move through the transitions between sequential reproduction units more quickly than would be possible under normal page turning.**

Accordingly, in the present invention unlike that Komatsu reference, the user does not need to separately determine whether or not he desires to view each successive element data type. Further, since all types of data elements are thinned in the present invention, there is no attempt to analyze only one type of data element as the user pages through the sequential reproduction units.

Therefore, it will be understood that in the present invention even if the user was to review each page as it was paged through in the high speed mode, he would not be limited to an analysis of only one type of data at any given time. Instead, he would be presented with a degraded image of the entire reproduction unit thereby allowing him to select a particular page quickly based upon any one (or all) of the types of data represented thereon (graphics, pictures, text, video) instead of being required to wait for the system to go through the entire hierarchy of types of data at their relative speeds of reproduction at any given time. In other words, each of the units of reproduction in the present invention is such as to transition into the next sequentially using only the data for high-speed reproduction.

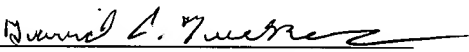
Accordingly, Applicants respectfully submit that the cited Komatsu reference does not contemplate “units of reproduction” as being groupings of any combination of image types, or the sequential transition between one unit of reproduction and the next. The Komatsu reference rather deals with sequential viewing of various types of data according to the speeds at which that type of data can be reproduced, not the sequential viewing of groupings of data elements regardless of type as in the present invention. In other words the Komatsu reference is conceptually limited to the situation in which a user views the different types of information stored on each page or other specified grouping of “reproduction units” sequentially based upon their respective type and the time needed to reproduce each specific the types whether those types are separated into significant and non-significant bits as in Yokono or not. Hence, in addition to the other clarifying language added to the claims of this application to overcome the Examiner’s positions under 35 USC 112, Applicants respectfully submit that the concept of transitioning between “units of reproduction” in sequence in a page turning manner also clearly distinguishes the present invention as described in the present specification from any construction of, or combination contained in, the cited art even when given its “broadest reasonable interpretation”.

For each and all of the foregoing reasons, therefore, entry of the foregoing Amendment, reconsideration and allowance of all of the claims present in this application after the entry of this Amendment in response to this submission are respectfully requested.

Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: June 19, 2007


SIGNATURE OF PRACTITIONER

Reg. No.: 27,840

David A. Tucker
(type or print name of practitioner)
Attorney for Applicant(s)

Tel. No. (617) 517-5508

Edwards Angell Palmer & Dodge LLP
P.O. Box 55874
P.O. Address

Customer No.: 21874

Boston, MA 02205